Ref: CWWDA/T/W/22/2023-2024

Date: 20th March, 2024

Dear Bidders,

**RE: DRILLING AND EQUIPPING OF TITILA MUKHA BOREHOLE BURA CONSTITUENCY, TANA RIVER COUNTY.**

**TENDER NO. CWWDA/T/W/22/2023-2024**

**ADDENDUM NO.1**

Reference is made to the above subject matter.

Pursuant to clause 10. of the Instruction to Tenders(ITT), the following sections of the bidding for the above mentioned tender has been amended as follows:

1. On the cover page, the contract name shall change from***“Construction of Titila Mukha Water Pan, Bura Constituency Tana River County*** to ***“Drilling and Equipping Of Titila Mukha Borehole, Bura Constiuency,Tana River County.”***
2. Page 4: Invitation to Tender, Item no. 4, Contract Name and Item Description shall change to be as 1 above
3. Page 28, Section II – Tender Data Sheet (TDS) ITT Reference number: ITT 1.1 The contract name shall change as 1 above.
4. Page 35, Evaluation criteria for ***Hydrologist with minimum of 5 years work experience in water pan construction*** shall change to ***Hydrologist with minimum of 5 years work experience in Borehole drilling.***
5. Page 79, Bill of Quantities for ***Construction of Titila Mukha Water Water Pan,Bura Constituency Tana River County*** shall be replaced with BoQ for ***Drilling and Equipping of Titila Mukha Borehole Bura Constituency,Tana River County.***

ENG. MARTIN TSUMA

**Ag. CHIEF EXECUTIVE OFFICER**

Encl. BoQ Drilling and Equipping of Titila Mukha Borehole Bura Constituency,Tana River County

| **DRILLING AND EQUIPPING OF TITILA MUKHA BOREHOLE BURA CONSTITUENCY, TANA RIVER COUNTY** | | | | | |
| --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |
| **Bill of Quantities** | | | | | |
|  |  |  |  |  |  |
|  | **DESCRIPTION** | **UNIT** | **QTY** | **RATE (Kshs)** | **AMOUNT (Kshs)** |
|  | **BILL NO 1: GENERAL AND PROVISIONAL ITEMS** |  |  |  |  |
| 1.1 | **Contractual Requirements** |  |  |  |  |
| 1.11 | Performance Security | Item | 1 |  |  |
| 1.12 | Insurance for loss or damage to the works , plant and materials | Item | 1 |  |  |
| **1.13** | **Allow sum for EIA report and NEMA licence aquistion, Compensation, RAP and related activities** | **PS** | **1** | **100,000.00** | **100,000.00** |
| 1.14 | Provide, erect and maintain sign boards at locations shown by the Engineer. | Item | 2 |  |  |
| 1.2 | **Administration costs** |  |  |  |  |
| **1.2.1** | **Allow sum to cover supervision costs of Engineers assigned on the project from the Employers head office to cover expenses for communications, transport, allowances, security support and allowances, stationery etc to be expended as directed by the Project Manager, inclusive of DLP.** | **Months** | **10** | **60,000.00** | **600,000.00** |
| 1.3 | **Testing of Works** |  |  |  |  |
| 1.4 | Sterilization of Water Retaining Structures constructed in the project including sterilization and cleaning | LS | 1 |  |  |
| 1.5 | **Allow for Capacity Building, Public Participation, Project Branding, Tree Planting and Handing Over and preparation of project completion report** | **PS** | **1** | **150,000.00** | **150,000.00** |
| 1.6 | Add ………. % for Contractors profit & overhead costs for item 1.13, 1.2.1 above | **%** |  |  |  |
|  |  |  |  |  |  |
|  | **TOTAL BILL NO. 1 GENERAL AND PROVISIONAL ITEMS (CARRIED TO SUMMARY)** |  |  |  |  |
|  |  |  |  |  |  |
|  | **BILL NO 2: SINKING AND CONSTRUCTION OF WELL** |  |  |  |  |
| **2.1** | **Well Siting** |  |  |  |  |
| 2.1.1 | Conduct a Hydrogeological Survey for appropriate drilling site selection and submit the Report to WRA for Approval.The Contractor will be required to make applications on behalf of the Board and ensure timely acquisition of the permits. | Sum | 1 |  |  |
| **2.2** | **Mobilization** |  |  |  |  |
| 2.2.1 | Mobilization of excavation unit to site, erect at position of well, dismantle and demobilise on completion | Sum | 1 |  |  |
| 2.2.2 | Provide all other plant, protective materials, equipment, stores, personnel materials and remove from site on completion | Sum | 1 |  |  |
| 2.2.4 | Allow for all costs involved in providing water for all requirements | Sum | 1 |  |  |
| **2.3** | **Drilling** |  |  |  |  |
| 2.3.1 | Drilling a 203 mm bore | m | 100 |  |  |
| 2.3.2 | Allow for collection and sampling of drill cuttings at 2 meter intervals | Item | 1 |  |  |
| 2.3.3 | Allow for logging of electrical conductivity readings at 5 meter intervals to monitor salinity | Item | 1 |  |  |
|  |  |  |  |  |  |
| **2.4** | **Well Construction** |  |  |  |  |
| 2.4.1 | Supply and install 156 mm plain casings UPVC CLASS E | m | 70 |  |  |
| 2.4.2 | Supply and install 165 mm screens UPVC CLASS E | m | 30 |  |  |
| 2.4.4 | Supply and install gravel pack with average grain size of 2 mm | Ton | 10 |  |  |
| 2.4.6 | Grouting of top 3 metres of annular space between casing and borehole | Item | 1 |  |  |
| 2.4.7 | Supply and Install 304 mm Stainless Steel Surface casing | m | 3 |  |  |
| 2.4.8 | Insert Well Top Cap | Item | 1 |  |  |
| 2.4.9 | Insert Well Bottom Cap | Item | 1 |  |  |
|  |  |  |  |  |  |
| **2.5** | **Well Development and Testing** |  |  |  |  |
| 2.5.0 | Well development using air or water jetting as recommended by the Engineer or his appointed representative | Hr | 4 |  |  |
| 2.5.1 | Mobilization of test pumping unit, Insertion and removal of equipment | Sum | 1 |  |  |
| 2.5.2 | Conduct Test pumping As Directed by Engineer | Hr | 24 |  |  |
| 2.5.3 | Recovery Test | Hr | 2 |  |  |
| 2.5.4 | Chemical/Bactereiological analysis of water from a reputable laboratory for comparison as directed by the Engineer | Item | 2 |  |  |
|  |  |  |  |  |  |
| **2.6** | **Well Completion** |  |  |  |  |
| 2.4.7 | Form concrete surface plug around casing with dimensions 1000 x 1000 x 1000 mm | Item | 1 |  |  |
| 2.6.3 | Fabrication and erection of borehole gantry (GI pipe gantry 100mm diameter 5m high with climbing ladder on concreted foot foundation) | Item | 1 |  |  |
|  | **TOTAL BILL NO. 2 SINKING AND CONSTRUCTION OF WELL (CARRIED TO SUMMARY PAGE)** |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
| **3** | **BILL NO 3: 1NO BOREHOLE EQUIPPING** |  |  |  |  |
|  | *Allow for Supply and Installation of the following. The cost should include all the required fittings* |  |  |  |  |
| **3.1** | **Pumps** |  |  |  |  |
|  | **Allow for Supply and Installation of a submersible pumping and suitable control panel equipment and solar crystaline panels. The cost should include all the required fittings, pump accessories as will be specified by the project manager upon completion of test pumping. (Provisional)*The pump size, solar power required and head will be determined also after test pumping and approval of the surpervising engineer*** | **P.Sum** | **1** | **1,200,000.00** | **1,200,000.00** |
|  |  |  |  |  |  |
| **3.3** | **Borehole Surface Sundries** |  |  |  |  |
|  | *Supply and Install the following* |  |  |  |  |
| 3.3.1 | 35mm diameter uPVC borehole pipes | m | 200 |  |  |
| 3.3.2 | 35 mm adaptor set | Item | 1 |  |  |
| 3.3.3 | Braided Rope | m | 200 |  |  |
| 3.3.4 | 2.5 mm drop cable | m | 200 |  |  |
|  |  |  |  |  |  |
| **3.4** | **Electrical Sundries within a radius of 50m from borehole** |  |  |  |  |
| 3.4.1 | Junction Box complete fittings | Item | 1 |  |  |
| 3.4.2 | Automated Voltage Switch Controller | Item | 1 |  |  |
| 3.4.3 | Main Switch Fuse | Item | 1 |  |  |
| 3.4.4 | 2.5mm \* 4 core u/g cable | m | 50 |  |  |
| 3.4.5 | 6 mm twin flat with Earth | m | 50 |  |  |
| 3.4.6 | Splicing kit | Item | 1 |  |  |
| 3.4.7 | Electrodes | Item | 2 |  |  |
| 3.4.8 | Electrode Cables | m | 200 |  |  |
| 3.4.9 | High level Tank Controller,float switch | Nr | 1 |  |  |
| 3.4.10 | Earth rod, c/w Clamp, earth cables | Set | 1 |  |  |
| 3.4.11 | Water meter with complete accessories | Nr | 1 |  |  |
| 3.4.12 | Allow for cable work and other related sundries | Sum | 1 |  |  |
| 3.4.13 | Well probe sensor | Item | 1 |  |  |
|  |  |  |  |  |  |
| **3.5** | **Solar** |  |  |  |  |
| 3.5.1 | Provide and install a 3m high solar support structure for the solar panels above | No | 1 |  |  |
| 3.5.2 | Allow for cable work and other related sundries | Sum | 1 |  |  |
| 3.5.3 | Install solar powered security floodlights at areas specified by Engineer | No | 2 |  |  |
|  | **TOTAL BILL No 3 BOREHOLE EQUIPING (CARRIED TO SUMMARY PAGE)** |  |  |  |  |
|  |  |  |  |  |  |
| **4** | **FENCING WORKS** |  |  |  |  |
| 4.1 | **Fencing post and chain link 3m above ground level** |  |  |  |  |
| 4.2 | Dig circular holes measuring 250mm diameter and 500mm in depth spaced at 3000mm covering the perimeter 300m | No. | 55 |  |  |
| 4.3 | Provide and erect pre-cast concrete fencing posts in dimensions of 2.5m in length and 0.15m square in thickness made of concrete C25 (1:1.5:3), height of 3.0m using concrete class 20 (C20) - 1:2:4, 20mm aggregates. | No. | 30 |  |  |
| 4.4 | Provide and fix anchor pre-cast concrete posts in all four corners of the field, every after 20 poles interval and all posts gate entrances, anchoring them securely using concrete class 20 (C20) 1:2:4 at bottom and nails at joints | No. | 16 |  |  |
| 4.4 | Using a 3m height of laminated chain link wire gauge 12.5 with 25 by 25 mesh, fence the perimeter leaving only the areas for prescribed gate. | M | 40 |  |  |
| 4.5 | Using barbed wire gauge 12.5, fix 5 strands of the wire, at a spacing of 0.6m interval. Price is inclusive of cost of binding wire. | No. | 200 |  |  |
| 4.6 | Provide and fix a lockable metal entrance gate size 4mx3m anchored on reinforced concrete pillars, complete with a site gate as directed by site supervisor. | No. | 1 |  |  |
| 4.7 | Concrete mix class 15 for anchoring chain link fence | Ls | 1 |  |  |
|  | **TOTAL BILL NO 4: FENCING WORKS (CARRIED TO SUMMARY PAGE)** |  |  |  |  |
|  |  |  |  |  |  |
| **5** | **PLATFORM, STORAGE TANK & PLUMBING WORKS** |  |  |  |  |
|  | **Mobilization** |  |  |  |  |
| **5.1** | **Inspection of Steel Tower and Tank, Pipes and Fittings, at supplier/Plant manufacturing by the Employer** | **PS** | **1** | **50,000.00** | **50,000.00** |
|  |  |  |  |  |  |
|  | **SUPPLY AND INSTALLATION OF Water Storage Resevoir** |  |  |  |  |
| 5.2 | Supply and install 1 No Plastic or Corrosion Resistant Steel Tanks As Approved by supervising engineer Capacity 10m3 | Item | 1 |  |  |
|  | **MASONRY PLATFORM** |  |  |  |  |
| 5.3 | Construction of masonry platform 3000 mm diameter.Height 1.2 meters with foundation 1.5 m deep with reinforced concrete class 25 200mm thickness. Wall constructed with well dressed machine cut blocks reinforced with hooping ion at alternative courses,platering to be done with smooth cement finish | Item | 1 |  |  |
| **5.7** | **Plumbing Works** |  |  |  |  |
| 5.6 | Allow for all the necessary plumbing works connecting the tank to be installed to the well and the standpipes using 40mm PN 25 PPR pipes as inlet, outlet and washout, including all necessary valves and fittings.As directed by the engineer | Item | 1 |  |  |
| 5.7.3 | Allow for Installation of a Stand pipe-Yard Tap, with soak pit excavated 2 by 2 by 2 meters bgl and as directed by the surpervising engineer. Yard tap should be raised 300 mm above the ground and should have atleast 3 taps. | No | 2 |  |  |
| 5.7.4 | Fabricate lockable metal grill at water points protecting the taps | Item | 3 |  |  |
|  | **TOTAL BILL No. 5 PLATFORM, STORAGE TANK & PLUMBING WORKS (CARRIED TO SUMMARY)** |  |  |  |  |
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|  | **SUMMARY FOR ALL THE BILLS** |  |  |  |  |
| **1** | **TOTAL BILL NO. 1 GENERAL AND PROVISIONAL ITEMS** |  |  |  | - |
| **2** | **TOTAL BILL NO. 2 SINKING AND CONSTRUCTION OF WELL** |  |  |  | - |
| **3** | **TOTAL BILL NO 3: 1NO BOREHOLE EQUIPPING** |  |  |  | - |
| **4** | **TOTAL BILL NO 4: FENCING WORKS** |  |  |  | - |
| **5** | **TOTAL BILL No. 5 PLATFORM, STORAGE TANK & PLUMBING WORKS** |  |  |  | - |
|  | **TOTAL** |  |  |  | **-** |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  | **TOTAL** |  |  |  | - |
|  |  |  |  |  |  |
|  | **Add 16% VAT** |  |  |  | - |
|  |  |  |  |  |  |
|  | **GRAND TOTAL** |  |  |  | **-** |